

COMPREHENSIVE PERFORMANCE MEASUREMENT SYSTEM IMPACT ON INDIVIDUAL PERFORMANCE: ROLE OF TRANSFORMATIONAL LEADERSHIP AS MEDIATING VARIABLE

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Abstract

This study seeks to conduct a practical investigation and present data on how performance measurement systems impact the individual performance of state-owned businesses in Indonesia, with a focus on the mediating role of transformational leadership. A transparent performance measurement system aids subordinates or employees in comprehending their specific duties, responsibilities, and objectives of implemented plans and strategies. The research model is examined and validated using SEM-PLS in this study. The key finding indicates that the relationship between a comprehensive performance measurement system and individual performance is influenced by transformational leadership. The positively highlighted coefficient suggests that, when associated with heightened levels of transformational leadership, a comprehensive performance measurement system leads to an increase in individual performance levels.

Keywords: Individual Performance, Goal Setting Theory, Transformational Leadership, Comprehensive Performance Measurement System, State-owned Enterprises

JEL Classification: M41, M38, M49

INTRODUCTION

Organizations need to safeguard and strengthen their competitive edge, and a key foundation for an organization's success in attaining its objectives lies in an effective performance measurement system. Performance measurement systems are also employed to assess, regulate, and enhance company procedures, monitor, control, evaluate, and provide feedback. Furthermore, it has the potential to stimulate employee motivation, inform managerial decision-making, contribute to continuous improvement, and facilitate the achievement of strategic objectives. (Kaplan & Norton, 1996; Lohman et al., 2004; Neely et al., 1994; Tapinos et al., 2005) and help make decisions and shape employee behavior (Sprinkle, 2003). Performance measurement systems are useful for measuring and reporting on various types of activities that can improve the performance of an organization and long-term organizational success is dependent on the actions of individual employees; similarly, a performance measurement system gives workers valuable information to support behaviors that lead to organizational success (Otley, 1999; Schiemann & Lingle, J, 1997).

According to Simon (2000), performance measurement gives each access to performance data that might improve their comprehension of their job duties. According to Koufteros et al. (2014) using a performance measurement system enhances capacities, which affect performance. To achieve higher organizational performance, Chenhall (2005) elucidates that the application of a comprehensive performance measurement system at the organizational level can help the organization gain a competitive advantage by acknowledging the contributions of lower-level employees to the success of the organization. Nevertheless, the effects of performance measurement at the operational level have not received considerable attention in previous literature on performance measurement systems, and the research results have shown inconsistency concerning the influence on company performance. (Bourne et al., 2005). Avey *et al.* (2011) explained that performance measurement system has a significant impact on job and employee performance but according to research by Yuliansyah and Khan (2015) performance measuring system has no bearing on worker performance.

This study examines the potential role that transformational leadership may have as a mediating factor in the link between comprehensive performance measurement systems and individual performance. This study employs the transformational leadership variable on the grounds that performance evaluations place a strong emphasis on the leadership function and leadership may be impacted by the performance measurement system when choices made at the operational level rely on its aggregated data (Ukko et al., 2007) and based on studies by Taylor (2009) and Gerrish (2016) this illustrates why creating a performance assessment system that can help improve performance requires the inclusion of mediating variables. Martinez (2005) also proposes that a performance assessment system, which links major objectives to employees' duties and continuous reviews, help employees focus their attention on topics that are vital to the organisation. In this instance, importance should be given to employee commitment and motivation, along with effective communication between management and employees, as integral elements of leadership. Hence, there exists a direct connection between leadership and performance measurement. From previous research Maesaroh et al.(2020) asserted that employee performance is significantly impacted by transformative leadership but other studies claim that transformative leadership has no appreciable impact on worker performance (Eliyana et al., 2019; Saleh & Elgelal, 2014; Siswatiningsih et al., 2018). The reason behind undertaking this research was the disparities in the outcomes of earlier studies.

The aim of this study was to carry out an empirical examination and provide data on how performance measurement systems affect the individual performance of state-owned businesses in Indonesia. The research model is analysed and tested in this study using the SEM-PLS methodology. Surveys were used to find the study's outcomes and the goal setting theory serves as the foundation for this study since it is one of the theories that can adequately explain the connection between performance and objectives. Individuals will be better able to work according to track. If the goals and objectives have been outlined in a clear and organised manner, then the work that needs to be done is on track. A clear performance measurement system will help subordinates or employees understand their specific duties and responsibilities as well as the goals of the plans and strategies that have been implemented. State-owned businesses are extremely important to the state since the money they make goes towards

funding state coffers as well as the industry they serve. As a result, enhancing state-owned enterprises performance is crucial. However the Central Statistics Agency said that 27 State-Owned Enterprises would suffer losses in 2021 (Hamdani, 2022). Apart from that, the contribution of state-owned enterprise income compared to Gross Domestic Product (GDP) achievements is only around 16 percent (Byarwati, 2023).

LITERATURE REVIEW

Comprehensive Performance measurement system is more effective at improving business performance since it includes both financial and non-financial metrics and covers several aspects of an organization's activities (Chenhall, 2005; Hall, 2008) and several authors have argued that comprehensiveness is a pertinent feature of performance measurement system that transcends the conventional division of financial and non-financial variables (Hall, 2011; Homburg et al., 2012). A comprehensive performance measurement system has proven to be more beneficial for achieving organisational strategic goals, In contrast to employing a single-dimensional performance measurement system focused solely on the financial perspective of the organization (Yuliansyah & Khan, 2015). A thorough performance measurement system can help businesses foster a more cooperative workplace culture and raise employee awareness of their individual roles in advancing the goals and objectives of the firm. It can therefore lead to improved synchronisation between every person's performance and the overarching plan (Pekkola et al., 2016). The implementation of a comprehensive performance measurement system significantly improves employee productivity and quality of work (Burney et al., 2009), Because employees feel more satisfied psychologically when a system encourages equity among all employees and recognises the unique contributions of each employee.

According to Goal Setting Theory, putting in place a performance measurement system motivate employees in an organisation to perform better at work by accepting and being aware of performance goals (Latham & Yukl, 1975). If the goals, accomplishments, and tasks that must be accomplished are outlined in a clear and organised manner, an employee will be better equipped to operate in accordance with the track. Clear performance metrics will help subordinates (workers) understand their specific tasks and duties as well as the goals of the plans and strategies that have been implemented. In the realm of thorough comprehensive performance review, the balanced scorecard adds a new perspective. The basic idea of the balanced scorecard is to use both financial and non-financial measures in evaluating performance. The balanced scorecard, according to Kaplan & Norton (2004), improves on conventional financial indicators by offering three non-financial metrics for performance evaluation. Viewpoints on customers, internal business processes, and learning and growth are among the non-financial metrics. The employment of comprehensive performance measurement has a positive impact on employee performance, according to research by Avey et al.(2011) , and Bangchockdee & Mia (2016) clarifies that a robust association exists between psychological capital, employee attitudes towards work, and performance. The following is the hypothesis put out based on the aforementioned line of reasoning: hypothesis 1: A comprehensive performance measurement system has a positive effect on individual performance

The use of a comprehensive performance measurement system will help leaders in the transformation process because the use of a comprehensive performance measurement system can be used by leaders to communicate and articulate company goals, strategies, goals and missions, and help clarify and communicate strategic intent and can capture various important performance dimensions in describe operations (Kaplan & Norton, 1996; Simon, 2000). According to Martinez (2005), a thorough performance evaluation system motivates workers to concentrate on tasks that are critical to the business. In this situation, motivation and effective communication between managers or supervisors and staff members are required. In order to ensure that individual performance rises and is in line with or linked with organisational goals, transformational leadership plays a critical role in giving direction, guidance, and incentive. Bititci *et al.* (2006) found that the proper leadership style is necessary to implement a performance measurement system; in this instance, transformational leaders can improve subpar performance within the organisation (Eisenbeiß & Boerner, 2013), because they give their subordinates autonomy and motivation to grow as individuals (Khan & Aslam, 2012), so the hypothesis proposed is as follows: hypothesis 2: A comprehensive performance measurement system has a positive effect on transformational leadership

A distinct organisational vision and the encouragement of employees to strive towards it by fostering relationships, understanding needs, and assisting employees in realising their potential are all components of transformational leadership, which can be characterised as inspiring leadership that contributes to positive outcomes for an organisation (Fitzgerald & Schutte, 2010). According to Moynihan *et al.* (2012), transformational leaders can positively impact the goal-setting process, which in turn affects employee motivation and output. Furthermore, transformational leaders can inspire and motivate their subordinates to set and pursue difficult goals by using their four key components; idealized influence, inspirational motivation, intellectual stimulation, and individualised consideration have the potential to elevate intrinsic motivation levels, consequently enhancing individual performance. (H. Khan *et al.*, 2020).

Camps and Rodríguez (2011) explain that individual employee performance and transformational leadership were found to have a positive correlation. Research conducted Masa'deh, *et al.* (2016) supports this by demonstrating that transformational leadership improves task performance. According to research by Sikalieh *et al.* (2017) employee performance is positively and significantly impacted by transformational leadership behaviour. Jung and Avolio (2000) stated that transformational leadership has a positive effect on improving employee performance directly, so the hypothesis 3 proposed is Transformational Leadership has a positive effect on individual performance

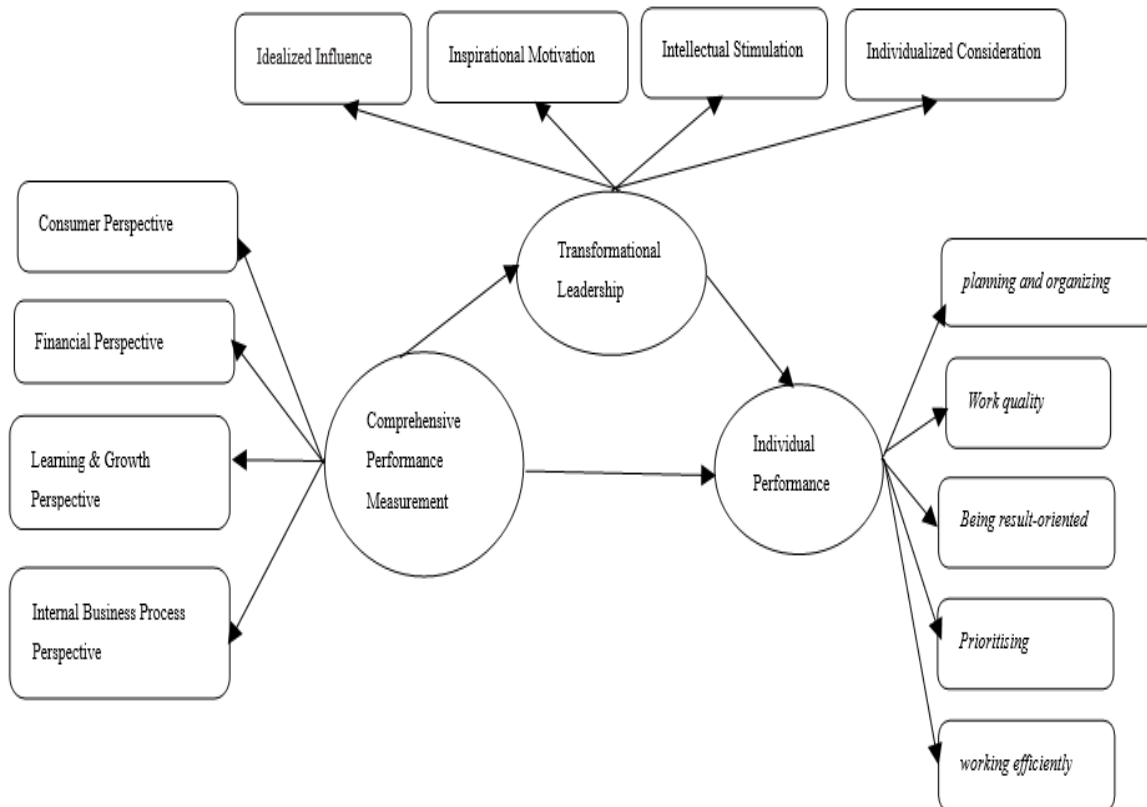


Figure 1: Conceptual Framework

RESEARCH METHOD

The study was carried out within State-owned enterprises with operational employees as the object of research and survey data was collected using a questionnaire. Multiple items and Likert-type statements with five-point rating scales (1 being "strongly disagree," and 5 being "strongly agree") were used to measure each construct. The indicators of the comprehensive performance assessment system utilised in this study are derived from studies conducted in the banking industry by Zahoor et al. (2018) and in the manufacturing industry by Albuhihi et al.(2017), using the task performance dimensions put forward by Koopmans et al. (2014), individual performance serves as the research's endogenous variable. Task performance, which is connected to an individual's abilities or competencies in carrying out the primary job activities, is the focuses of this study. Prior studies also looked at individual performance using the task performance dimension (López-Cabarcos et al., 2022; Sungu et al., 2019). A measure created by Carless *et al.* (2000) was used to assess transformational leadership and Partial Least Square (PLS) software is used in the structural equation modelling method of data analysis.

RESULT

Measurements of the external model are employed to evaluate the reliability and construct validity. The loading factor values of individual structural indicators determine the convergent validity, while the Fornell-Larcker value is indicative of discriminant validity. The results for each study variable's outer loading are presented in Table I. This table demonstrates that all indicators possess a correlation coefficient exceeding 0.7, affirming their validity.

Table I: Outer Loading

	Comprehensive Performance Measurement System	Individual Performance	Transformational Leadership
IP1		0,831	
IP4		0,772	
IP5		0,810	
IP2		0,708	
PM10	0,709		
PM11	0,757		
PM15	0,730		
PM16	0,726		
PM2	0,752		
PM3	0,708		
PM5	0,732		
PM6	0,744		
PM7	0,743		
PM9	0,719		
PM14	0,725		
PM4	0,729		
PM1	0,731		
TL1			0,782
TL2			0,751
TL3			0,765
TL4			0,765
TL5			0,728
TL6			0,772
TL7			0,725

The research revealed that the innovation indicator (PM11), which has a loading factor of 0.757, is the best indicator for measuring the perception of internal process business perspective. The study found that the most impactful measure for gauging the perception of the financial perspective is the indicator of cost production or productivity improvement (PM2), evidenced by its loading factor of 0.752. In terms of assessing the customer perspective, the analysis identified customer satisfaction (PM6) as the most robust indicator, boasting a loading factor of 0.744. Additionally, for measuring the learning and growth perspective, the indicator of employee retention (PM15) emerged as the strongest, with a loading factor of 0.730.

Table II: The Discriminant Validity Test

Variable	Comprehensive Performance Measurement System	Individual Performance	Transformational Leadership
Comprehensive Performance Measurement System	0,731		
Individual Performance	0,600	0,782	
Transformational Leadership	0,687	0,600	0,756

Table II presents the results regarding discriminant validity, employing the Fornell-Larcker Criterion. The analysis reveals that the Fornell-Larcker value surpasses the correlation value for other variables, indicating the validity of all variables.

Table III: The Reliability Test

Variable	Cronbach's Alpha	Composite Reliability
Comprehensive Performance Measurement System	0,928	0,937
Individual Performance	0,788	0,862
Transformational Leadership	0,875	0,903

Table III displays the outcomes of reliability assessments conducted for each variable. According to the analysis of Cronbach's alpha and composite reliability, both metrics exceed a value of 0.7, signifying a commendable level of a reliability.

Hypothesis testing

Structural model evaluation or an inner model is used to predict the relationship between latent variables. Every partial direct effect path underwent partial hypothesis testing using the t-test (t-statistic) and P-value. Table IV displays the findings from the direct effects test.

Table IV: The Direct Effect Test

Relationship	Coefficient	T Statistics (O/STDEV)	P Values	Result
Comprehensive Performance Measurement System -> Individual Performance	0,356	4,032	0,000	Significant
Comprehensive Performance Measurement System -> Transformational Leadership	0,687	16,926	0,000	Significant
Transformational Leadership -> Individual Performance	0,356	4,031	0,000	Significant

According to the findings in Table IV, the inner model testing indicates that a comprehensive performance measurement system has a positive and significant impact on individual performance, with a p-value of 0.000 (< 0.05) and a coefficient value of 0.356. The positively marked coefficient implies that as the impact of the comprehensive performance measurement system increases, the value of the individual performance variable will also increase, and vice versa. A comprehensive performance measurement system exhibits a positive and significant impact on transformational leadership, with a p-value of 0.000 (< 0.05) and a coefficient value of 0.687. The positively marked coefficient indicates that as the influence of a comprehensive

performance measurement system increases, the value of transformational leadership also increases, and vice versa. Similarly, transformational leadership has a positive and significant effect on individual performance, with a p-value of 0.000 (<0.05) and a coefficient value of 0.356. The positively marked coefficient implies that as the impact of transformational leadership grows, the value of individual performance will also increase, and vice versa.

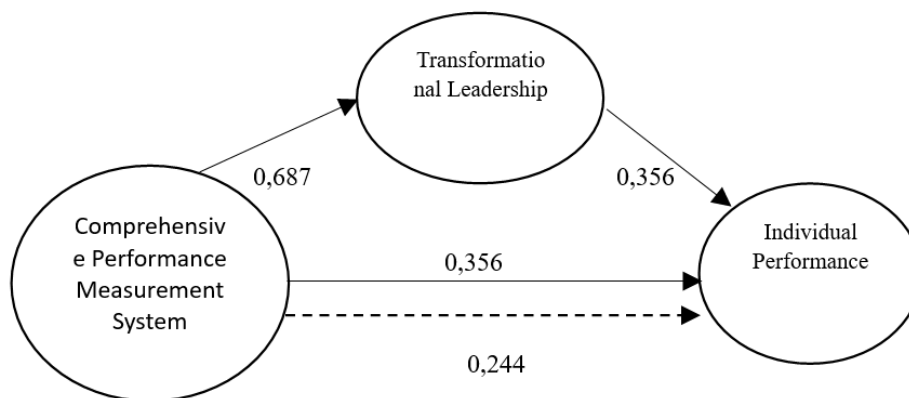


Figure 2: Path Diagram

Table V. The mediation role of transformational leadership in the connection between a comprehensive performance measurement system and individual performance.

Relationship	Coefficient	T Statistics (O/STDEV)	P Values
Comprehensive Performance Measurement System -> Transformational Leadership -> Individual Performance	0,244	3,629	0,000

The outcomes of the mediation test presented in Table IV indicate that the coefficient of the indirect effect is 0.244, and the p-value of 0.000 (< 0.05) suggests that transformational leadership serves as a mediator in the impact of a comprehensive performance measurement system on individual performance. As indicated by the positively marked coefficient, an enhanced comprehensive performance measurement system is associated with increased individual performance, particularly when mediated by higher levels of transformational leadership. Therefore, transformational leadership serves as a mediating factor in the connection between a comprehensive performance measurement system and individual performance.

DISCUSSION

The key finding of this study is that the relationship between a comprehensive performance measurement system and individual performance is mediated by transformational leadership. The positive marked coefficient indicates that, if accompanied by higher levels of transformational leadership, a comprehensive performance measurement system will result in higher levels of individual performance. Transformational leadership thus serves as a mediating

variable in the relationship between a comprehensive performance measurement system and individual performance. The analysis reveals that a comprehensive performance measurement system, assessed through the four perspectives of the balanced scorecard, significantly influences transformational leadership. This influence is measured through four indicators: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, with a coefficient of 0.687. This, in turn, has a direct or indirect impact on individual performance, with a direct effect coefficient of 0.356 and an indirect effect coefficient of 0.244. The study's findings corroborate those of Burney (2007) investigation, which demonstrated the beneficial impact of strategic the performance measuring system on individual performance.

CONCLUSIONS

The study's findings indicate that the connection between individual performance and a comprehensive performance measurement system is influenced by transformational leadership. The positively emphasised coefficient suggests that, when coupled with elevated levels of transformational leadership, a comprehensive performance measurement system leads to increased levels of individual performance. Therefore, transformational leadership functions as a moderating element in the relationship between individual performance and a comprehensive performance measurement system.

RESEARCH RECOMMENDATION

The government should contemplate or devise a policy aimed at enhancing the execution of transformational leadership. Additional research is necessary to investigate alternative mediating variables that connect comprehensive performance measurement to individual performances. Supervisors can improve transformational leadership by implementing ethical behavior and moral standards (idealized influence), inspiring subordinates (inspirational motivation), encouraging employees to develop innovative strategies (intellectual stimulation) and paying attention to the growth and achievements of each individual or subordinate (individualized consideration).

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